

Appl. No. 10/055,749

AMENDMENTS TO THE CLAIMS

## Claims 1-17 (Canceled)

18. (Currently Amended) A method of identifying a compound capable of inhibiting the growth of a pathogenic microorganisms which comprises:

- (a) identifying an enzyme involved in the conversion of  $\alpha$ -glucose-1-phosphate + ATP into ADP-glucose + Ppi, which enzyme is present in a pathogenic microorganism but is not present in humans;
- (b) identifying a compound that inhibits the conversion of  $\alpha$ -glucose-1-phosphate + ATP into ADP-glucose + Ppi by binding to ~~an~~said enzyme involved in the conversion of  $\alpha$ -glucose-1-phosphate + ATP into ADP-glucose + Ppi; and
- (c) exposing said pathogenic microorganism to said compound to determine the effect of said compound on the growth of said pathogenic microorganism.

## 19. (Canceled)

20. (Currently Amended) ~~A method of identifying a compound capable of inhibiting the growth of pathogenic microorganisms by interfering with energy storage or utilization in said microorganism which comprises identifying a compound that inhibits the activity of~~ The method according to claim 18, wherein said enzyme is ADP glucose pyrophosphorylase (EC 2.7.7.27) by binding to said ADP glucose pyrophosphorylase.

## 21. (Canceled)

22. (Currently Amended) A method of identifying a compound capable of inhibiting the growth of a pathogenic microorganisms by interfering with the activity of ADP-glucose pyrophosphorylase (EC 2.7.7.27) by binding to said ADP glucose pyrophosphorylase which method comprises:

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- (a) identifying an enzyme involved in the conversion of  $\alpha$ -glucose-1-phosphate + ATP into ADP-glucose + Ppi, which enzyme is present in a pathogenic microorganism but is not present in humans;
- (b) identifying a compound that inhibits the conversion of  $\alpha$ -glucose-1-phosphate + ATP into ADP-glucose + Ppi by binding to said enzyme; and
- (c) incubating a sample of ~~bacteria~~ said pathogenic microorganism in a media in the presence or absence of a test said compound, and assessing the effect on conversion of  $\alpha$ -glucose-1-phosphate, wherein a lower level of conversion of  $\alpha$ -glucose-1-phosphate in the presence of said test-compound, compared with the level of conversion of  $\alpha$ -glucose-1-phosphate in the absence of said test compound, indicates that said test compound interferes with the activity of ADP glucose pyrophosphorylase (EC 2.7.7.27) by binding to said ADP glucose pyrophosphorylase.

## 23. (Canceled)

24. (Currently Amended) A method of identifying a compound capable of inhibiting the growth of a pathogenic microorganisms by interfering with the activity of ADP glucose pyrophosphorylase (EC 2.7.7.27) which method comprises:

- (a) identifying an enzyme involved in the conversion of  $\alpha$ -glucose-1-phosphate + ATP into ADP-glucose + Ppi, which enzyme is present in a pathogenic microorganism but is not present in humans;
- (b) exposing a substrate comprising ADP glucose pyrophosphorylase (EC 2.7.7.27) to a plurality of test compounds and identifying a an active test compound which binds to said ADP glucose pyrophosphorylase (EC 2.7.7.27); and
- (c) exposing said pathogenic microorganism to said compound to determine the

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effect of said compound on the growth of said pathogenic microorganism.

25. (Canceled)

26. (Previously Presented) The method of claim 24, wherein said substrate comprises a plurality of ADP glucose phosphorylase (EC 2.7.7.27) molecules and said test compounds comprise a label to permit identification of a test compound which binds to ADP glucose pyrophosphorylase (EC 2.7.7.27).

27. (Canceled)

28. (Currently Amended) The method according to any one of claims 18, 20, 22, 24 and 26-27, wherein said pathogenic microorganism is a member selected from the group consisting of *Chlamydia pneumoniae*, *Chlamydia trachomatis*, *Escherichia coli* O157, *Haemophilus influenzae*, *Mycobacterium leprae*, *Mycobacterium tuberculosis*, *Salmonella typhimurium* and *Vibrio cholerae*, *Streptococcus pneumoniae*, *Yersinia pestis*, *Bacillus subtilis* and *Bacillus anthracis*.

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Currently Amended) The method according to any one of claims 20, 22, 24, 26, 27 and 28, wherein said ADP glucose pyrophosphorylase (EC 2.7.7.27) is in the form of a purified enzyme product.

33. (Canceled)